

8-7: Pascal's Triangle

Warm-up: Give the number of subsets of the set of letters $\{A, E, I, O, U, Y\}$ that have the given number of elements.

1. 0 elements
2. 1 element
3. 2 elements
4. 3 elements
5. 4 elements
6. 5 elements
7. 6 elements

Pascal's Triangle:

$(r + 1)^{\text{st}}$ term in row n of Pascal's Triangle:

Properties of Pascal's Triangle:

1.

2.

3.

4.

Example 1: Use the formula for ${}_nC_r$ to find the first four terms in row 9 of Pascal's Triangle.

Example 2: Give a polynomial formula for the third term in the n^{th} row of Pascal's Triangle.

Example 3: Here are the first 6 terms of row 11 in Pascal's Triangle: 1, 11, 55, 165, 330, 462. Use them to construct row 12.

Homework:

"Don't compromise yourself. You are all you've got." - Janis Joplin